November, 1998 No. NR/RF/001

Off-Highway Vehicle Four-Wheeler Survey: Synopsis of 1997 Moab Easter Jeep Safari Findings

Douglas K. Reiter[1], Dale J. Blahna[1], and Russ VonKoch[2]

This fact sheet presents a synopsis of research findings contained in a report prepared for the Bureau of Land Management (BLM) titled "Off-Highway Vehicle Four-Wheeler Survey: A summary report of Moab Easter Jeep Safari Participants." The data reported on were collected in January and February 1998.

Research Background

The public lands around Moab, Utah have become a major recreation destination. Off-highway vehicle (OHV) use with four-wheel drive vehicles (such as Jeeps, Toyota Land Cruisers, four-wheel drive pickup trucks, etc.) is an important component of the recreational landscape. Other components include hiking, camping, river running, rock climbing, mountain biking, and dirt biking, to name a few. The diversity of recreational activities taking place near Moab reflects the variety of interests, needs, and values held by visitors and residents. Such diversity compounds the public land manager's job of maintaining and managing both human and natural resources.

In an effort to better serve public land users and improve the management of outdoor recreation areas, the Bureau of Land Management (BLM) Moab Field Office asked recreation researchers at Utah State University's (USU) Institute of Outdoor Recreation and Tourism (IORT) to conduct a mail survey to study the needs and opinions of four-wheelers. The survey sample consisted of 392 randomly-selected registered participants in the 1997 Moab Easter Jeep Safari. Thus, our sample consisted of more experienced and committed four-wheelers than the occasional or one-time OHVer. We sent a 12 page survey with about 200 questions to the primary drivers; 276 were returned completed for a 70% response rate.

Demographic Characteristics

The following are demographic results from the survey:

- **Sex and Race:** mostly male & Caucasian
- **Average age:** 40 years
- **Education:** 80% reported formal education after high school
- **Residence:** Utah (57%), but only 4% from immediate counties, CO (15%), CA (8%), NM(4%), AZ (3%)
- **Community size:** 83% grew up and 84% now live in urban settings (populations > 5,000)
- **Employment:** Most employed full time (86%) in managerial (29%), craftsmen (22%), professional (17%) and clerical and sales (12%) positions, only 3% indicated employment in service sector
- **Median household income:** $55,000 per year

Four-Wheel Experience

As mentioned above, the four-wheelers we surveyed seem to be highly committed to their sport. More than 80% rated their skill level as advanced or expert while only about 2% rated themselves as beginners. They four-wheel off-highway an average of 18 times per year and once or twice in the Moab area per year. Although there isn't a clear pattern of new recruitment ("first-timers") to the activity in general, there appears to be a steady increase in OHVing in the Moab area. During the past seven years (1990 to 1997) the recruitment rate has been about 25% per year for this particular user group.

Contrary to popular myth, this type of recreation experience is not predicated on speed. The average amount of time spent on Moab area trails is eight hours and the average distance traveled is about 30 miles. Because of the nature of the Moab Easter Jeep Safari (e.g., highly organized, guided trips), the average number of vehicles in each group is 15 while the average number of people is 27. The respondents also told us that the usual makeup of their groups consists of "family and friends."

More than half of the respondents indicated they are members of an organized four-wheel group or club and that their group is also a primary source of information about four-wheeling. Other important information sources are magazines and newspapers and word of mouth (friends and family). The least used information sources are tour guides, radio and television, and government agency offices or personnel.

Motivations

The survey instrument contained 30 statements designed to reflect the reasons respondents go four-wheeling in general and in the Moab area. For analysis, these items were combined into eight categories.The top two categories for four-wheeling in general and in the Moab area are to experience Natural Settings/Escape and to see New Landscapes (Table 1). For specific scale items, seeing "exhilarating scenery" and "new and different places" were the highest ranked expectations for four-wheeling in Moab, while "getting away from it all" was rated highest for OHVing in general.

Table1. Ranking of eight general reason categories for OHVing in the Moab Area and in General[1].

Reason Category	Category rank for OHVing in	
	Moab	General
New Landscapes	1	1 (tie)
Natural Setting/Esape	2	1 (tie)
Self Test	3	3
Socializing	4	5
Predictability/Control	5	4
Self Improvement	6	7
Nature Study	7	6
Thrill/Social Status	8	8

[1]Based on a scale of 30 individual items such as "being with family and friends", "meeting other people," and "being part of an organized group or outing" (for Socializing)

The Self Test and Socializing items were ranked third and fourth overall and all of the items in these categories were rated higher as reasons for four-wheeling in Moab compared to four-wheeling in general. Among the specific items in the Socializing category, "being with family and friends" was the highest rated item for both OHVing in general and in Moab, and it was the third highest rated item of all 30 scale items. "Meeting other people" and "being part of an organized group," on the other hand, were rated relatively low, although they were rated slightly higher for four-wheeling in Moab than for four-wheeling in general.

This suggests that socializing within one's personal group is a very important motive, but socializing outside one's group is much less important, especially outside of an organized event like the Easter Jeep Safari. For the Self Test category, "driving on challenging trails" was rated especially high for driving in Moab.

Given the importance of experiencing nature to the OHVers, it was surprising that the Nature Study items were ranked relatively low. This may be due to the noise of the machines and the level of concentration necessary to negotiate difficult terrain. Respondents gave "seeing wildlife" a moderate rating for driving in general, but it was significantly lower as a motive for driving in the Moab area. This could reflect the perception that there is little wildlife in the desert compared to other regions, or that there are so many other distinctive natural features in the Moab area that viewing wildlife drops in importance.

The lowest ratings were given to the items in the Self Improvement and Thrill/Social Status categories. In these categories, the only moderately important items were "feeling self-reliant" and "having a thrilling ride." The items suggesting potential danger ("opportunity to get lost," "driving off trails," and "speed"), however, were the lowest ranked reasons for going four-wheeling both in general and in Moab.

Moab Four-Wheel Experience

This part of the study was designed to assess off-highway use levels specific to the Moab area. About one-tenth of the respondents indicated that their most recent trip to Moab was their first while the average number of previous visits for the other 90% was about 12.

The average number of different Moab trails they had driven on was 13 with half indicating 10 or more. The preferred trails can be characterized as challenging, somewhat difficult, close to town, and with qualities unique to the Moab area such as spectacular scenic vistas or driving on slickrock.

Management Preferences

Several multi-item questions were used to measure respondents' attitudes toward management preferences. The questions tapped attitudes toward social (e.g., crowding and conflicts), managerial (e.g. facilities, information, staffing needs), and environmental (e.g., soil, wildlife, vegetation) aspects of management. Specific problems (e.g., litter, graffiti) and controversies (e.g., cattle, driving off trail) were also included in the preference questions.

Management actions. We asked the respondents' opinion on 17 items regarding how managers should prioritize their efforts. These items measure preferences toward trail and road management, resource protection, visitor information, facility needs, agency staffing, and crowding reduction.

The **highest** ranked priorities were:

- Protect historical/cultural artifacts (#1)
- Protect wildlife
- Provide four-wheeling safety & trail etiquette information
- Designate new four-wheeling roads and trails
- Prevent impacts to natural vegetation

The **lowest** ranked priorites were:

- Provide toilets at existing trail access points
- Provide more law enforcement personnel on trails
- Provide more agency personnel (land managers) on roads and trails
- Maintain trails to make them more passable (#17)

Over 90% of the respondents feel that the physical impacts from four-wheeling in the Moab area are currently acceptable or even low. While this result may reflect the relatively resilient appearing nature of the redrock country, it may also be a political statement on behalf of four-wheelers. The respondents may fear that by indicating that impacts occur as a result of four-wheeling, land managers may be prompted to close existing trails.

Thus while it may be difficult to interpret the practical meaning of this result, it does indicate there may be major differences between the perceptions of land managers and the Easter Jeep Safari participants on the issue of resource impacts.

Regarding preferences for land management approaches in "intensively used" four-wheeling areas, survey respondents overwhelmingly rated "keep existing trails open" highest among six items. "Provide information on how four-wheelers can reduce plant and soil impacts" and "work to maintain scenic, relatively natural character of the area" were also rated moderately high, while "restricting the number of vehicles" was ranked lowest. Informational approaches were preferred and restricting vehicle travel to designated routes was rated just slightly above the scale midpoint.

General management problems. Respondents were also asked to evaluate 19 potential management problems. In the eyes of the Easter Jeep Safari four-wheelers, the two biggest problems are with OHV drivers themselves: 80% indicated inexperienced people driving on difficult terrain and 62% listed four-wheelers going off established trails as management problems.

The next highest ranked problems are related to resource impacts: "litter or trash at trail access points" (58%) and "litter or trash on roads or trails" (55%). Soil erosion (52%), graffiti (46%), and defacing historic resources (43%) were ranked fifth, sixth, and eighth respectively. While the absolute amount of litter, erosion, and vandalism on Moab area trails seems low compared to many other OHV driving areas, these attitudes may reflect expectations for nearly pristine conditions in the Moab area, and that seeing any resource impacts is unacceptable. Open-ended comments indicate that many respondents feel most impacts are caused by mountain bikers and dispersed campers, however, not by OHVers.

The social conflict and crowding items are considered to be problems by relatively few respondents. Large groups of four-wheelers, mountain bikers, too many four-wheelers on trails, and too many people at access points were the major social concerns and listed as problems by between 34% and 43% of the respondents. Problems related to cattle, hikers, backpackers, and horseback riders were listed by very few people (5% to 16%). Thus, crowding and conflicts of large groups and mountain bikers may be minor problems, or on the cutting edge of being viewed as problems by the OHVers, but they are not considered major problems yet.

Summary of management preferences. While these are very general results, and specific staffing and facility decisions need to be made on a site-specific basis, the results indicate that a low level of facilities and management presence is preferred by the Easter Jeep Safari participants. In fact, for this sample group, the more rustic, remote, and technically challenging the trails the better. In general, their management priorities are:

1. protect the natural resources,
2. provide new trails,
3. let existing trails get more difficult, and
4. emphasize informational approaches rather than use restrictions to protect the environment.

The message seems to be: it's alright to work to maintain the naturalness of intensively used areas, but don't close trails or restrict the number of drivers that may use them. The results also indicate that respondents feel that reducing crowding is not a major concern even on heavily used trails and that managing the physical impacts of dispersed campers and mountain bikers is as or more important than impacts caused by OHVers who stay on trails.

Willingness to Pay

There was a series of questions assessing respondents' attitudes about paying fees to four-wheel in the Moab area. We introduced these questions with the statement:

> "Four-wheeling generates very little revenue to help manage routes and access areas. Land managers and emergency service providers have identified the need to provide more funding for four-wheel management in the Moab area. Projects could include restrooms, marking of routes, development of parking and camping facilities, low-impact education, search-and-rescue equipment, and land protection activities."

About 72% of the respondents indicated they would be willing to pay a fee, 25% indicated they would not, and 3% indicated they might be willing to pay depending on the collection method or how the revenue was distributed. The most preferred collection method was "weekly permit for all dispersed recreation users in non-fee areas" (31%) followed by "annual permit for all dispersed recreation users in non-fee areas" (21%) and "daily use fee for certain heavily used areas" (15%). There was little support for an "annual use fee for permit to use all trails in the Moab area," "a weekly use fee for permit to use all trails in the Moab area," or a "Utah state tax on sale on new 4x4 vehicles" (all less than 10% support).

Trip Characteristics and Economic Activity

The last questions asked about characteristics of non-local respondents' last trip to Moab. About 64% indicated that their most recent trip to Moab occurred in either March or April 1997. (In 1997, the Easter Jeep Safari began on the last weekend of March.) About 12% indicated that they had visited again in September, when there was a smaller organized four-wheeling event called the Labor Day Campout. About 6% visited in the summer months (May through August) and 18% in the fall and winter months, October through February.

Most of our respondents (97%) own their vehicles while very few (2%) rented their vehicle from local businesses. However, we found that they still provided revenue to local businesses. The average number of days stayed in the area was about five and more than 68% indicated that they paid to stay overnight in either a motel, private campground, or government operated pay campground. A majority also ate their dinner meals in local restaurants or taverns (60%) while a sizable number went to restaurants for their breakfasts (40%) and lunches (20%).

While in Moab, Jeep Safari participants do a variety of outdoor recreation activities. They enjoy outdoor photography (75%), driving for pleasure (69%), camping (58%), hiking (52%), picnicking (46%), and visiting Native American sites (37%), among others. They get most of their information about Moab from family and friends (65%), magazine and newspaper articles (34%), and four-wheel clubs (32%). Government agency offices or personnel, advertisements, guidebooks, and radio and television spots each were only indicated by less than 3% of the respondent as information sources they use.

Acknowledgments:
The authors would like to thank Red Rock 4-Wheelers, Inc. for providing the names and addresses of registered Easter Jeep Safari participants from which the survey sample was drawn. We would also like to thank the survey recipients who showed enough interest in the natural resource issues to take time out of their schedule to complete a rather complex survey instrument. Their input provides valuable information regarding future land management decisions.

Contributing Authors:
[1] Institute of Outdoor Recreation and Tourism Department of Forest Resources Utah State University, Logan, UT 84322-5215

[2] Bureau of Land Management, Moab District Office, 82 East Dogwood Suite G, Moab, UT 84532